1. An apparatus for fault tolerant virtual memory management, the apparatus comprising:

a processing node configured to access at least one storage device and respond to paging synchronization messages, the processing node comprising:

a local memory, and

a memory manager configured to manage a plurality of memory blocks contained within the at least one storage device and the local memory as directed by the paging synchronization messages.

2. The apparatus of claim 1, wherein the paging synchronization messages are selected from the group consisting of a space request message, an allocate memory message, a release memory message, a lock request message, a read header message, a write page message, a sense request message, an allocate read message, an allocate write message, and a release pointer message.

3. The apparatus of claim 1, further comprising a communication module configured to send and receive the paging synchronization messages

4. The apparatus of claim 1, wherein the at least one storage device comprises a plurality of redundantly arranged storage devices.

5. The apparatus of claim 1, further comprising a storage cache memory.

6. The apparatus of claim 1, wherein the memory manager is further configured to allocate memory blocks and associate a globally unique identifier therewith.

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7. The apparatus of claim 1, wherein the memory manager further comprises a policy assignment module configured to associate a policy with a memory block allocation size.

8. The apparatus of claim 7, wherein the policy is user defined.

9. The apparatus of claim 1, wherein the processing node is a storage controller.

10. The apparatus of claim 9, wherein the memory manager is configured to conduct staging and destaging operations.

11. The apparatus of claim 1, wherein the memory manager further comprises a copy module configured to selectively use a plurality of copy methods.

12. The apparatus of claim 11, wherein the plurality of copy methods are selected from the group consisting of a SCSI command copy method, a DMA copy method, and a messaging copy method.

13. The apparatus of claim 1, wherein the memory manager is further configured to provide a memory pointer in response to a memory pointer request.

14. The apparatus of claim 13, wherein the memory pointers comprise read only pointers and write pointers.

15. A computer readable storage medium comprising computer readable program code for fault tolerant virtual memory management, the program code configured to conduct a method comprising:

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receiving paging synchronization messages from a redundant processing node;

managing a plurality of memory blocks contained within a storage device and a local memory in response to the paging synchronization messages.

16. The computer readable storage medium of claim 15, wherein the method further comprises sending paging synchronization messages to the redundant processing node.

17. The computer readable storage medium of claim 15, wherein the paging synchronization messages are selected from the group consisting of a space request message, an allocate memory message, a release memory message, a lock request message, a read header message, a write page message, a sense request message, an allocate read message, an allocate write message, and a release pointer message.

18. The computer readable storage medium of claim 15, wherein the method further comprises allocating memory blocks and associating a globally unique identifier therewith.

19. The computer readable storage medium of claim 15, wherein the method further comprises associating a policy with a memory structure allocation size.

20. The computer readable storage medium of claim 19, wherein the method further comprises defining the policy based on user preferences.

21. The computer readable storage medium of claim 15, wherein managing paging comprises staging and destaging operations.

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22. The computer readable storage medium of claim 15, wherein managing paging further comprises copying data using a plurality of copy methods selected from the group consisting of a SCSI command copy method, a DMA copy method, and a messaging copy method.

23. An apparatus for fault tolerant virtual memory management, the apparatus comprising:

means for receiving paging synchronization messages from a redundant processing node;

means for managing a plurality of memory blocks contained on a storage device and a local memory in response to the paging synchronization messages.

24. A system for fault tolerant virtual memory management, the system comprising:

a first storage device;

a first processing node configured to access the first storage device and send paging synchronization messages;

a second storage device; and

a second processing node configured to access the second storage device and respond to paging synchronization messages from the first processing node.

25. The system of claim 24, wherein the paging synchronization messages are selected from the group consisting of a space request message, an allocate memory message, a release memory message, a lock request message, a read header message, a write page message, a sense request message, an allocate read message, an allocate write message, and a release pointer message.

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26. The system of claim 24, further comprising a communication module configured to send and receive the paging synchronization messages

27. The system of claim 24, wherein the at least one storage device comprises a plurality of redundantly arranged storage devices.

28. A method for fault tolerant virtual memory management, the method comprising:

receiving paging synchronization messages from a redundant processing node;

managing paging on a storage device and a local memory in response to the paging synchronization messages.

29. The method of claim 28, wherein the paging synchronization messages are selected from the group consisting of a space request message, an allocate memory message, a release memory message, a lock request message, a read header message, a write page message, a sense request message, an allocate read message, an allocate write message, and a release pointer message.

30. The method of claim 28, wherein the program code is further configured to send paging synchronization messages to a redundant processing node.

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